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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/644,857	08/21/2003	Toshiyuki Sashihara	071671-0168	7518
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FOLEY AND LARDNER LLP			WU, JIANYE	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)
	10/644,857	SASHIHARA, TOSHIYUKI
	Examiner	Art Unit
	Jianye Wu	2616

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 31 August 2007.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-20 is/are pending in the application.
 - 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-20 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO/SB/08) V
 Paper No(s)/Mail Date _____

- 4) Interview Summary (PTO-413)
 Paper No(s)/Mail Date _____
- 5) Notice of Informal Patent Application
- 6) Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

2. **Claims 1-6, 8-16, and 18-20** are rejected under 35 U.S.C. 103(a) as being unpatentable over Barnes, JR (US 20030065805 A1, hereinafter **Barnes**) in view of Olkkonen et al. (US 6842460 B1, hereinafter **Olkkonen**).

For claim 1, Barnes discloses a system for informing that the user is in or not in wireless LAN (WLAN, [0044]) service area comprising at least:

a preset data storing means (160 of Fig.1; or “stored in memory”, first line of [0110]) for storing identification data (125 of Fig. 1; or “the authentication data”, [0110], line 1) of a hot spot dealer (particular area, line 3 of [0385], to which the user is subscribed, and whoever provides wireless service authentication is considered as a hot spot dealer, such as the one who manages a WLAN [0044]);

a wireless communication means (Communication Module 105 of Fig.1; or anyone of wireless LAN, WLAN, wireless MAN, and wireless PAN in [0044]);
a display means (Display 175 of Fig. 1; or high resolution color display or dynamic touch screen, [0037]) and
a means functioning (combination of Authentic. Module 125 and Display 175 in Fig. 1);

when providing a display as to whether the user is in the service area of a hot spot service, to obtain the electric field intensity (strength of the communication signal, [0032]) of a channel as a subject of survey and identification data of a dealer and check (validation, [0110]) whether the obtained identification data (authentication input, [0110]) is identical with identification data of the user's own subscribed hot spot dealer, which is stored in the preset data storing means (authentication process described in [0110]-[115]);

when the obtained identification data is identical with the identification data of the user's own subscribed hot spot dealer, to output data for display on the display means such that the user can decide that the obtained electric field intensity is that of the user's own subscribed hot spot dealer (authentication process described [0110]-[0115]); and

Barnes is silent on displaying the electric field intensity (signal strength, [0032]);

In the same field of endeavor, Olkkonen discloses displaying the signal strength on a wireless device (Fig. 2B). Olkkonen provides more detailed display information regarding wireless system for users to keep them better informed regarding wireless system status.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to display the electric field intensity (signal strength) to provide network information for users.

As to **claim 2**, Barnes and Olkkonen in combination disclose the system according to claim 1, Barnes further discloses wherein the display means includes:

a light-emitting means (LED(s), line 5 of [0037]; or LCD that is commonly used as laptop monitor); and

a control means (circuit for controlling LEDs or graphics card controlling LCD in a laptop) for causing the light-emitting means to emit informing light in different colors (color display, line 9 of [0037] or different colors of LEDs) in the case when the user is in the service area of the user's own subscribed hot spot dealer and the case when the user is in the service area of the dealer in roaming contract relation to the own hot spot dealer.

For **claim 3**, Barnes discloses a system (Fig. 1) for informing that the user is in or not in a wireless LAN service area strength of the communication signal, (occurrence of ... within a predetermined distance, [0032], line 3-5, or WLAN, [0044]), obtaining congestion degree in service area and outputting the obtained congestion degree (congestion, [0327]) to display means and display the status of the system to the display means.

Barnes is **silent on** that the congestion is network congestion occurring at data link level.

In the same field of endeavor, Olkkonen discloses at data link level communication (Logic Link Control and Adaptation Protocol 220 of Fig. 2A) and traffic information (Link Manager 218 of Fig. 2A). Furthermore, information of network congestion at data link level is analogous to traffic congestion information in nature (such as delays, congestion back-ups, accidents and etc. [0327]) and displaying the traffic information on the display device is either the same or very similar regardless of the traffic type.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to display network congestion information on a wireless device.

As to **claim 4**, Barnes and Olkkonen in combination disclose the system according to claim 1, Olkkonen further discloses that the system further comprises a means for collecting data link layer protocol data.

Barnes and Olkkonen do not explicitly disclose obtaining the network congestion degree in the service area and outputting the obtained network congestion degree to the display means.

However, information of network congestion at data link level is analogous to traffic congestion information in nature (such as delays, congestion back-ups, accidents and etc. [0327]) and displaying the traffic information on the display device is either the same or very similar regardless of the traffic type.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to display network congestion information on a wireless device.

For claim 5, Barnes and Olkkonen in combination disclose a system for informing that the user is in or not in a wireless LAN service area according to claim 1, wherein the display means includes:

a light-emitting means (LED, [0037]; or LCD that is commonly used as laptop monitor); and

a means functioning to control the display of the congestion degree by controlling the flickering period of the light-emitting means based on the congestion degree (control logic circuit for LED or LCD in a laptop).

As to claim 6, Barnes discloses the system according to claim 4, Barnes further discloses wherein the display means includes:

a light-emitting means (LED, [0037]; or LCD that is commonly used as laptop monitor); and

a means (Display Module 175 of Fig. 1) functioning to emit light in different colors (a high resolution color display, [0037] or LED) in the case of displaying that the user is in the service areas;

Barnes is silent on displaying the network congestion information by controlling the flickering cycle according to the network congestion degree.

However, displaying the network congestion information is disclosed by claim 4, and the concept and benefit of displaying different degrees of a variable by controlling the flickering cycle is well known in the art and Examiner takes an Official Notice of this notion.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to use the flickering rate of a display to indicate the degree of the network congestion.

As to **claim 8**, Barnes and Olkkonen in combination disclose the system according to claim 1, which further comprises an agent authentication means (125 of Fig. 1) set by the user's own subscribed hot spot dealer and a hot spot dealer in roaming contract relation to the own hot spot dealer (roaming between different vendors is the common knowledge in the art); and in which:

at the user side terminal data concerning the authentication means of the user's own subscribed hot spot dealer and a hot spot dealer in roaming contract relation to the own hot spot dealer and data necessary for these authentications are preliminarily stored in the memory means (stored in memory, [0110]);

the agent authentication means carries out authentication by using the data preset by the user (authentication input, [0110]); and

when the agent authentication means has carried out authentication successfully, data indicative of that the pertinent service area is that of the successfully authenticated hot spot dealer is outputted to the display means for display (line 1-2, [0112]).

As to **claim 9**, Barnes and Olkkonen in combination disclose the system according to claim 1, which further comprises a means for deciding, when a check is made as to whether the obtained identification data is identical with the identification data of the user's own subscribed hot spot dealer as stored in the preset data storing means, that the obtained identification data and the identification data stored in the

preset data storing means are identical when the two data are not perfectly identical but partly identical (sufficient to identify the user, [0115]).

As to **claim 10**, it is a station system (such as a laptop equipped with IEEE 802.11b card running XP Windows system) claim of claims 1 to 9, therefore, is rejected for the same reason as explained in claims 1-9.

As to **claim 11-16**, they are equivalent to method claims of claims 1-6, therefore, is rejected for the same reason as explained in claims 1-6 above.

As to **claim 18**, it is equivalent to claims 8, therefore, is rejected for the same reason as explained in claims 8 above.

3. **Claims 7, 17 and 19-20** are rejected under 35 U.S.C. 103(a) as being unpatentable over Barnes and Olkkonen in claim 1, further in view of Jim Geier, "Overview of the IEEE 802.11 Standard", Dec 6, 2001, hereinafter **Geier**.

As to **claim 7**, Barnes and Olkkonen disclose the system according to claim 1, but **is silent** on using wireless LAN ESS (extended service set) ID as identification data.

In the same field of endeavor, Geier teaches ESS (Subsection "Extended Service Set (ESS) Networks", page 12; particularly Fig. 3.7). Since Geier teaches wireless LAN standard, it is obvious expedient to combine Barnes and Geier together to use ESS ID as identification data.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to display to use ESS ID as identification data due to obvious industrial expedient for the benefit of applying the technology to more sophisticated networks.

claim 17 is equivalent method claim of claim 7, therefore, is rejected for the same reason as explained in claim 7 above.

As to **claim 19**, Barnes and Olkkonen in combination disclose the system according to claim 4, but are silent on wherein the congestion degree is obtained by measuring reliability of reception of an acknowledged (ACK) frame that is transmitted by an access point, or by measuring frequency of reception of a Clear to Send (CTS) frame that is transmitted by the access point.

However, Geier discloses ACK (ACK, Page 17) frame type and CTS (CTS, Page 17) frame type.

Barnes teaches the concept of WLAN and Geier further discloses details of the WLAN protocol.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to obtain congestion degree by measuring reliability of reception of an acknowledged (ACK) frame that is transmitted by an access point, or by measuring frequency of reception of a Clear to Send (CTS) frame that is transmitted by the access point.

As to **claim 20**, Barnes and Olkkonen in combination disclose the method according to claim 11, but are silent on wherein the congestion degree is obtained by measuring reliability of reception of an acknowledged (ACK) frame that is transmitted by an access point, or by measuring frequency of reception of a Clear to Send (CTS) frame that is transmitted by the access point.

However, Geier discloses ACK (ACK, Page 17) frame type and CTS (CTS, Page 17) frame type.

Barnes teaches the concept of WLAN and Geier further discloses details of the WLAN protocol.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to obtain congestion degree by measuring reliability of reception of an acknowledged (ACK) frame that is transmitted by an access point, or by measuring frequency of reception of a Clear to Send (CTS) frame that is transmitted by the access point.

Response to Amendments/Remarks

4. Applicant's arguments and all other documents filed on 8/31/2007 with respect to the rejection(s) of claim(s) 1-20 under 35 U.S.C 103(a) have been fully considered but they are not persuasive.

5. For claims 1 and 11, Applicant argues:

a) a hot spot dealer is not disclosed by Barnes or Olkkonen (paragraph 2 in page 9 in page 10) that.

b) there is no reason to display such authentication data in the system of Barnes, since his system appears to automatically allow control of a device by another device without user input.

c) there is no indication as to whether or not any of these ad hoc networks are the user's own subscribed hot spot dealer or a roaming contract relation dealer (paragraph 3, page 9)

In response:

- a) Examiner interprets whoever manages the authentication is as the "hot spot dealer". The authentication process is disclosed by Barnes ([0110]), therefore, "hot spot dealer" is implicitly disclosed by Barnes. Furthermore, the authentication in wireless applications is a common practice in the art, there is nothing novel about it.
- b) Barnes teaches requiring user input of authentication data, such as voice, iris, face, finger print ([0111]), or other image data, ([0112]), as recited in the Office Action.
- c) Barnes suggested the roaming contract relation dealer (different vendors and etc., line 14-20 of [032], or third party computer system, [0111])

6. Applicant argues that in claim 18 (page 10, paragraph 1) Barnes does not teach or suggest the hot spot dealer, as discussed in claim 1.

In response, Barnes does suggest the hot spot dealer, as explained in claim 1 above.

7. Applicant argues that in claim 3 and 13 (in page 10, paragraph 2-4) Barnes does not disclose the network congestion since Barnes discloses the vehicle traffic congestion.

In response, the vehicle traffic congestion and the network congestion are similar in nature, it would be obvious to one skilled in the art to display the network congestion information in light of displaying of other types of congestions.

8. Applicant argues that in claim 4 and 14 (in page 10, paragraph 5-6) Barnes does not teach collecting data link layer protocol data in order to obtain a congestion degree in the service area.

In response, Examiner considers collecting data link layer level protocol data, obtaining the network congestion degree in the service area is well known in the art and takes an Official Notice on this notion.

9. Applicant argues in claims 5 and 15 (page 10-11) that LCD is distinct from LED.

In response, Barnes clearly discloses LEDs [0036] which reads on LED perfectly, as recited by Office Action. LCD is just an additional information to disclose light-emitting means. A LCD is certainly more powerful and has more functions in comparing with a LED.

10. Applicant argues in claims 19 and 20 (page 11) have been amended to recite features that are not taught by cited prior art.

In response, the cited prior art clearly discloses all the new limitations of amended claims, as indicated in this Office Action above.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

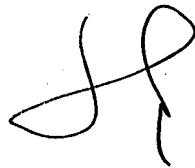
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jianye Wu whose telephone number is (571)270-1665. The examiner can normally be reached on Monday to Friday, 8am to 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Seema Rao can be reached on (571)272-3174. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Jianye Wu

10/24/07



KWANG BIN YAO
SUPERVISORY PATENT EXAMINER

